SWARTHMORE COLLEGE,

1880-81.

CALENDAR 1881-82.

1881

	1st Day	2nd Day	3rd Day	4th Day	5th Day	6th Day	7th Day
	...	...	...	...	...	...	1
First	2	3	4	5	6	7	8
Month	9	10	11	12	13	14	15
	16	17	18	19	20	21	22
	23	24	25	26	27	28	29
	30	31	..	...	...	..	...
	...	...	1	2	3	4	5
Second	6	7	8	9	10	11	12
Month	13	14	15	16	17	18	19
	20	21	22	23	24	25	26
	27	28	...	...	...	...	...
	...	...	1	2	3	4	5
Third	6	7	8	9	10	11	12
Month	13	14	15	16	17	18	19
	20	21	22	23	24	25	26
	27	28	29	30	31	...	...
	..	...	...	...	...	1	2
Fourth	3	4	5	6	7	8	9
Month	10	11	12	13	14	15	16
	17	18	19	20	21	22	23
	24	25	26	27	28	29	30
	...	...	...	...	...	...	...
	1	2	3	4	5	6	7
Fifth	8	9	10	11	12	13	14
Month	15	16	17	18	19	20	21
	22	23	24	25	26	27	28
	29	30	31	...	...	...	...
	...	...	...	1	2	3	4
Sixth	5	6	7	8	9	10	11
Month	12	13	14	15	16	17	18
	19	20	21	22	23	24	25
	26	27	28	29	30	...	...

1881

	1st Day	2nd Day	3rd Day	4th Day	5th Day	6th Day	7th Day
	...	...	...	...	...	1	2
Seventh	3	4	5	6	7	8	9
Month	10	11	12	13	14	15	16
	17	18	19	20	21	22	23
	24	25	26	27	28	29	30
	31	...	...	...	...	...	...
	...	1	2	3	4	5	6
Eighth	7	8	9	10	11	12	13
Month	14	15	16	17	18	19	20
	21	22	23	24	25	26	27
	28	29	30	31	...	...	...
	...	..	...	...	1	2	3
Ninth	4	5	6	7	8	9	10
Month	11	12	13	14	15	16	17
	18	19	20	21	22	23	24
	25	26	27	28	29	30	...
	...	...	...	...	...	...	1
Tenth	2	3	4	5	6	7	8
Month	9	10	11	12	13	14	15
	16	17	18	19	20	21	22
	23	24	25	26	27	28	29
	30	31	...	...	...	...	...
	...	...	1	2	3	4	5
Eleventh	6	7	8	9	10	11	12
Month	13	14	15	16	17	18	19
	20	21	22	23	24	25	26
	27	28	29	30	...	...	...
	..	...	...	...	1	2	3
Twelfth	4	5	6	7	8	9	10
Month	11	12	13	14	15	16	17
	18	19	20	21	22	24	
	25	26	27	28	29	30	31

1882

	1st Day	2nd Day	3rd Day	4th Day	5th Day	6th Day	7th Day
	1	2	3	4	5	6	7
First	8	9	10	11	12	13	14
Month	15	16	17	18	19	20	21
	22	23	24	25	26	27	28
	29	30	31	...	...	...	...
	...	...	...	1	2	3	4
Second	5	6	7	8	9	10	11
Month	12	13	14	15	16	17	18
	19	20	21	22	23	24	25
	26	27	28	..	...	...	...
	...	...	...	1	2	3	4
Third	5	6	7	8	9	10	11
Month	12	13	14	15	16	17	18
	19	20	21	22	23	24	25
	26	27	28	29	30	31	...
	...	...	...	...	..	..	1
Fourth	2	3	4	5	6	7	8
Month	9	10	11	12	13	14	15
	16	17	18	19	20	21	22
	23	24	25	26	27	28	29
	30	..	...	...	...	...	...
	...	1	2	3	4	5	6
Fifth	7	8	9	10	11	12	13
Month	14	15	16	17	18	19	20
	21	22	23	24	25	26	27
	28	29	30	31	...	...	...
	...	...	...	...	1	2	3
Sixth	4	5	6	7	8	9	10
Month	11	12	13	14	15	16	17
	18	19	20	21	22	23	24
	25	26	27	28	29	30	...
	...	...	...	...	...	...	...

1882

	1st Day	2nd Day	3rd Day	4th Day	5th Day	6th Day	7th Day
	...	...	...	...	...	...	1
Seventh	2	3	4	5	6	7	8
Month	9	10	11	12	13	14	15
	16	17	18	19	20	21	22
	23	24	25	26	27	28	29
	30	31	...	...	...	...	...
	...	...	1	2	3	4	5
Eighth	6	7	8	9	10	11	12
Month	13	14	15	16	17	18	19
	20	21	22	23	24	25	26
	27	28	29	30	31	...	...
	...	...	...	...	...	1	2
Ninth	3	4	5	6	7	8	9
Month	10	11	12	13	14	15	16
	17	18	19	20	21	22	23
	24	25	26	27	28	29	30
	...	...	...	...	...	...	...
Tenth	1	2	3	4	5	6	7
Month	8	9	10	11	12	13	14
	15	16	17	18	19	20	21
	22	23	24	25	26	27	28
	29	30	31	...	...	...	...
	...	...	...	1	2	3	4
Eleventh	5	6	7	8	9	10	11
Month	12	13	14	15	16	17	18
	19	20	21	22	23	24	25
	26	27	28	29	30	...	...
	...	...	...	...	...	1	2
Twelfth	3	4	5	6	7	8	9
Month	10	11	12	13	14	15	16
	17	18	19	20	21	22	23
	24	25	26	27	28	29	30
	31	...	...	...	...	..	...

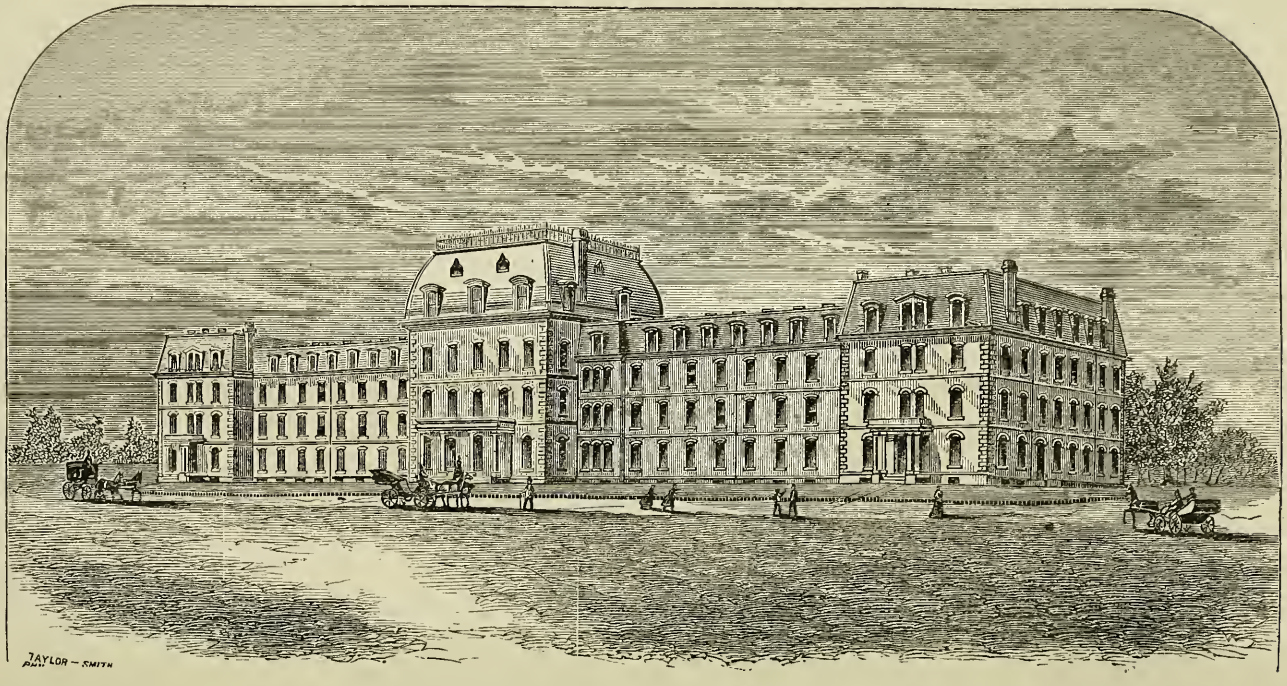
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SWARTHMORE COLLEGE, DELAWARE COUNTY, PA.

[FRONT VIEW.]



SWARTHMORE COLLEGE, DELAWARE COUNTY, PA.

[REAR VIEW.]

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TWELFTH

ANNUAL CATALOGUE

OF

SWARTHMORE COLLEGE,

SWARTHMORE, PA.

1880-81.

WITH MINUTES OF THE

SEVENTEENTH ANNUAL MEETING

OF THE

STOCKHOLDERS.

PRESS OF
FRIENDS' BOOK ASSOCIATION,
706 Arch Street, Philadelphia.

CALENDAR.

1880-81.

1880.	Ninth month 14th,	Third-day,	Meeting of the Board of Managers.
"	Ninth month 14th,	Third-day,	Examinations for admission begin.
"	Ninth month 16th,	Fifth-day,	Examinations for admission completed, and old students return.
"	Ninth month 17th,	Sixth-day,	Regular Exercises begin.
"	Twelfth month 6th,	Second-day,	Meeting of the Board of Managers.
"	Twelfth month 7th,	Third-day,	ANNUAL MEETING OF STOCKHOLDERS.
"	Twelfth month 7th,	Third-day,	Meeting of the Board of Managers.
"	Twelfth month 22d,	Fourth-day,	Holidays begin at noon.
1881.	First month 3rd,	Second-day,	Students return for roll call at 8 P. M.
"	First month 4th,	Third-day,	Regular Exercises begin.
"	Third month 8th,	Third-day,	Meeting of the Board of Managers.
"	Fourth month 13th,	Fourth-day,	Spring Holidays begin.
"	Fourth month 18th,	Second-day,	Students return. for roll call at 8 P. M.
"	Fifth month 7th,	Seventh-day,	Junior Exhibition.
"	Fifth month, 16th,	Second-day,	Senior Examinations begin.
"	Fifth month 23rd,	Second-day,	Senior Examinations completed, the results announced, and parts for commencement assigned.
"	Sixth month 13th,	Second-day,	Annual Examinations begin.
"	Sixth month 20th,	Second-day,	Annual Examinations completed, and the result announced.
"	Sixth month 20th,	Second-day,	Meeting of the Board of Managers, and the Annual Business Meeting of the Alumni Association in the evening.
"	Sixth month 21st,	Third-day,	COMMENCEMENT.
"	Sixth month 22nd,	Fourth-day,	Summer Vacation begins.
1881.	Ninth month 13th,	Third-day,	Meeting of the Board of Managers.
"	Ninth month 13th.	Third-day,	Examinations for admission begin.
"	Ninth month 15th,	Fifth-day,	Examinations for admission completed, and old students return.
"	Ninth month 16th,	Sixth-day,	Regular Exercises begin.
"	Twelfth month 5th,	Second-day,	Meeting of the Board of Managers.
"	Twelfth month 6th,	Third-day,	ANNUAL MEETING OF STOCKHOLDERS.
"	Twelfth month 6th,	Third-day,	Meeting of the Board of Managers.
"	Twelfth month 23d,	Sixth-day,	Holidays begin.
1882.	First month 2nd,	Second-day,	Students return for roll call at 8 P. M.
"	First month 3rd,	Third-day,	Regular Exercises begin.

CORPORATION.

Officers.

CLERKS.

GEORGE W. HANCOCK,	*Fortieth St. and Lancaster Ave., Phila.*
MATILDA GARRIGUES,	*Kingsessing, Philadelphia.*

TREASURER.

ROBERT BIDDLE,	*511 Commerce Street, Philadelphia.*

BOARD OF MANAGERS.

Term expires Twelfth Month, 1881.

SAMUEL WILLETS,	*No. 303 Pearl Street, New York.*
EDWARD H. OGDEN,	*No. 314 Vine Street, Philadelphia.*
DANIEL UNDERHILL,	*Jericho, L. I.*
EMMOR ROBERTS,	*Fellowship, N. J.*
JANE P. DOWNING;	*No. 1615 Race Street, Philadelphia.*
MARGARET G. CORLIES,	*No. 31 E. Thirtieth Street, New York.*
MARY C. BLACKBURN,	*No. 244 N. Eutaw St., Baltimore, Md.*
MARY W. COCKS,	*Old Westbury, L. I.*

Term expires Twelfth Month, 1882.

ISAAC STEPHENS,	*Trenton, N. J.*
JAMES V. WATSON,	*No. 718 Franklin Street, Philadelphia.*
CLEMENT BIDDLE,	*Chaddsford, Pa.*
ISAAC H. CLOTHIER,	*No. 801 Market Street, Philadelphia.*
MARTHA G. McILVAIN,	*Sixtieth St. and Elmwood Ave., Phila.*
SARAH H. BAKER,	*Orange, N. J.*
ELIZA H. BELL,	*Bayside, Queens County, N. Y.*
SALLIE M. OGDEN,	*No. 314 Vine Street, Philadelphia.*

Term expires Twelfth Month, 1883.

JOHN D. HICKS,	*Old Westbury, L. I.*
ROBERT WILLETS,	*Flushing, L. I.*
JOSEPH WHARTON,	*P. O. Box 2786, Philadelphia.*
M. FISHER LONGSTRETH,	*Sharon Hill, Delaware Co., Penna.*
HANNAH W. HAYDOCK,	*No. 212 East 12th Street, New York.*
ANNA M. FERRIS,	*Wilmington, Delaware.*
MARY T. LONGSTRETH,	*Sharon Hill, Delaware Co., Penna.*
ANNIE SHOEMAKER.	*Friends' Central School, 15th & Race Sts., Phila.*

Term expires Twelfth Month, 1884.

CLEMENT M. BIDDLE,	*No. 514 Commerce Street, Philadelphia.*
JOSEPH WILLETS,	*Trenton, N. J.*
ELI M. LAMB,	*Friends' School, Lombard St., Balt. Md.*
BENJAMIN HALLOWELL, JR.,	*Eastern Penitentiary, Philadelphia.*
RACHEL T. JACKSON,	*No. 141 N. Twentieth St., Philadelphia.*
ANNA M. HUNT,	*No. 1802 Wallace St., Philadelphia.*
CAROLINE UNDERHILL,	*Jericho, L. I.*
SUSAN W. LIPPINCOTT,	*Cinnaminson, N. J.*

Officers and Committees of the Board.

PRESIDENT.

SAMUEL WILLETS.

SECRETARY.

M. FISHER LONGSTRETH.

AUDITORS.

M. FISHER LONGSTRETH, GEORGE W. HANCOCK.

INSTRUCTION.

CLEMENT BIDDLE, M. FISHER LONGSTRETH,
ANNA M. FERRIS, ANNIE SHOEMAKER,
JOSEPH WHARTON, EMMOR ROBERTS.
BENJAMIN HALLOWELL, Jr.

MUSEUM AND PHYSICAL LABORATORY.

JOSEPH WHARTON, ANNA M. HUNT,
M. FISHER LONGSTRETH, MARY T. LONGSTRETH.

FRIENDS' HISTORICAL LIBRARY.

RACHEL T. JACKSON, ISAAC STEPHENS,
ANNA M. FERRIS, ELI M. LAMB.

FINANCE.

ISAAC H. CLOTHIER, JAMES V. WATSON,
EDWARD H. OGDEN.

BUILDING AND PROPERTY.

EMMOR ROBERTS,
JAMES V. WATSON,
ISAAC H. CLOTHIER,
CLEMENT M. BIDDLE,
DANIEL UNDERHILL,
GEORGE W. HANCOCK.

TRUSTS, ENDOWMENTS AND SCHOLARSHIPS.

SAMUEL WILLETS,
JOSEPH WHARTON,
DANIEL UNDERHILL.
ISAAC H. CLOTHIER,
CLEMENT M. BIDDLE, Sec'y and Treas. of Committee.

EXECUTIVE COMMITTEE.

ISSAC H. CLOTHIER,
CLEMENT BIDDLE,
DANIEL UNDERHILL,
JOSEPH WHARTON,
EMMOR ROBERTS,
EDWARD H. OGDEN,
GEORGE W. HANCOCK,
BENJAMIN HALLOWELL, JR.,
RACHEL T. JACKSON,
MARTHA G. McILVAIN,
JANE P. DOWNING,
ANNA M. FERRIS,
MARY T. LONGSTRETH,
ANNA M. HUNT,
SALLIE M. OGDEN,
SUSAN W. LIPPINCOTT,
M. FISHER LONGSTRETH, *Ex-officio.*

Faculty of Government.

THE PRESIDENT.

THE MATRON.

EUGÈNE PAULIN.

ARTHUR BEARDSLEY.

WILLIAM HYDE APPLETON.

SUSAN J. CUNNINGHAM.

SAMUEL S. GREEN.

MARY L. AUSTIN.

THOMAS S. FOULKE.

Officers of Government and Instruction.

PRESIDENT.

EDWARD H. MAGILL, A. M.

MATRON.

CAROLINE S. WOOD.

EDWARD H. MAGILL, A. M.,
Professor of the Latin Language.

EUGÈNE PAULIN, A. M.,
Professor of the French Language and of Mental and Moral Philosophy.

ARTHUR BEARDSLEY, C. E.,
Professor of Mechanics and Engineering, and Librarian.

WILLIAM HYDE APPLETON, A. M.,
Professor of the Greek and German Languages.

SUSAN J. CUNNINGHAM,
Professor of Mathematics.

SAMUEL S. GREEN, M. S.,
Professor of Physics and Chemistry.

MARY L. AUSTIN,
Assistant Professor of the Latin Language.

THOMAS S. FOULKE,
Superintendent.

JOSEPH LEIDY, M. D. LL. D.
Professor of Natural History.

JOSEPH THOMAS, M. D. LL. D.,
Professor of English Literature and of History.

ELIZABETH C. MILLER, A. B.,
Instructor in Rhetoric and Composition.

ELLEN M. GRISCOM.
Instructor in Free-hand Drawing.

WILLIAM P. HOLCOMB, B. L.,
Instructor in German and in History.

AMELIA P. BUTLER,
Instructor in Theory and Practice of Teaching.

JAMES E. WELD,
Instructor in Elocution and in Botany.

EDWARD H. KEISER, B. S.,
Instructor in the Chemical Laboratory.

INSTRUCTORS IN THE PREPARATORY SCHOOL.

EUGÈNE PAULIN, A. M.,
Instructor in French.

SAMUEL S. GREEN, M. S.,
Instructor in Physics and Chemistry.

MARY L. AUSTIN,
Instructor in Latin.

ELIZABETH C. MILLER, A. B.,
Instructor in Rhetoric and Composition.

ESTHER T. MOORE, A. B.,
Instructor in Mathematics, and in English Grammar.

ELLEN M. GRISCOM,
Instructor in Free-hand Drawing.

WILLIAM P. HOLCOMB, B. L.,
Instructor in History.

ELIZABETH T. LETCHWORTH,
Instructor in Penmanship.

AMELIA P. BUTLER,
Instructor in English Branches.

LILLIAN M. ROCKWELL,
Instructor in Charge of Study Room.

JAMES E. WELD,
Instructor in Reading and Physiology.

EDWARD H. KEISER, B. S.,
Instructor in English Branches.

FLORENCE HALL, A. B.,
Instructor in French, and in Reading.

STUDIES.

The studies required for a degree extend over a period of four years. Each class is divided into three sections as follows:—

The Classical Section, in which prominence is given to the study of the ancient languages. Students completing the courses of this section receive the degree of *Bachelor of Arts.*

The Literary Section, in which the leading studies are the modern languages, including English. Students completing the courses of this section receive the degree of *Bachelor of Literature.*

The Scientific Section, in which the study of the sciences is made most prominent. Students completing the required courses of this section receive the degree of *Bachelor of Science.*

REQUIREMENTS FOR ADMISSION.

To secure places, applications for admission should be made as early as possible by letter to the President.

All applicants must submit satisfactory testimonials of good moral character from their last teachers, and students coming from another college must present certificates of honorable dismission from the institution left.

Students are not considered as regular members of the College until, after a residence of at least four months, they have been admitted to matriculation. Before this they are students on probation.

Examinations for admission will be held on Third, Fourth, and Fifth-days, the 13th, 14th and 15th of Ninth month 1881. Candidates must present themselves at the College at three o'clock P. M., on Third-day, the 13th of Ninth month.

Especial attention is called to the importance of a thorough preparation in the studies required for admission. The want of this is a serious source of embarrassment to future progress, and is rarely repaired by subsequent study.

Candidates imperfectly prepared are offered (in the Preparatory school) facilities for making up their deficiencies.

Candidates for admission to the Freshmen class will be examined on the following subjects and text-books, or their equivalents:

Those entering the **CLASSICAL SECTION** in—

Latin.—Harkness's Grammar; Harkness's Reader; Harkness's Composition, first thirty lessons; Cæsar's Gallic War, first three books; and Virgil's Æneid, first two books.

French.—Magill and Paulin's First Lessons; Magill's Grammar; Magill's Introductory Reader; or an equivalent amount of German.

Mathematics.—Arithmetic; Algebra, to Equations of the Second Degree; Davies's Legendre's Geometry, first three books.

English.—English Grammar and Spelling.

History.—History of the United States; History of England; History of Greece.

Geography.—Ancient Geography; Modern Geography; Physical Geography.

Those entering the **LITERARY SECTION** in—

French.—Magill and Paulin's First Lessons; Magill's Grammar; Magill's Introductory Reader, or an equivalent amount of German.

Mathematics.—Arithmetic; Algebra, to Equations of the Second Degree; Davies's Legendre's Geometry, first three books.

English.—English Grammar and Spelling.

History.—History of the United States; History of England; History of Greece.

Geography.—Ancient Geography; Modern Geography; Physical Geography.

Those entering the **SCIENTIFIC SECTION** in—

Mathematics.—Arithmetic; Algebra, to Equations of the Second Degree; Davies's Legendre's Geometry, first four books.

Natural Philosophy.—Elementary Physics.

French.—Magill and Paulin's First Lessons; Magill's Grammar; Magill's Introductory Reader; or an equivalent amount of German.

English.—English Grammar and Spelling.

History.—History of the United States; History of England.

Geography.—Modern Geography; Physical Geography.

For advanced standing, candidates must first be examined for admission to the Freshman Class; then in all the *required* studies already gone over by the class for which they offer themselves, and in as many *elective* studies as they would have pursued if they had entered at the beginning of the course.

Special Students.—A limited number of Teachers and other persons of fair education and mature years, who wish to improve themselves in particular studies, will be received without examination, as special students, and allowed to pursue their studies in any of the regular classes.

ARRANGEMENT OF STUDIES.

The attention of parents and guardians is called to the following arrangement of the Courses of Study. In the lower College classes most studies are required, while in the higher many are elective. The pursuit of the regular course, whether students are candidates for degrees or not, is especially recommended. When the programme will admit of it, students who are qualified to do so, may elect any of the studies required of another section of their own class. When students are qualified in any particular study to recite with a class other than their own, they may be permitted to do so by vote of the Faculty.

The Periods of recitation are forty-five minutes each.

FIRST YEAR OR FRESHMAN STUDIES.

For the Degree of A. B.

	No. of ex. per week.
Latin	4
Mathematics,	3
French	3
Natural History,	2
English Lit. 1st ½ yr.	1=½
Mineralogy, Geology or Botany 2d ½ yr.	1=½
Elocution,	1
Rhetoric and Composition,	2
Elective,	6
	22

Elective Studies.

One of the Studies taken must be a Language.

Greek,	3
German,	3
History,	3
Teaching (Theory 1, Prac. 4)	=3

For the Degree of B. L.

The studies are the same as the above, except Latin and Greek. Instead of Latin are required:—

English Etymology,	2
Critical Readings from Modern English,	2

For the Degree of B. S.

	No. of ex. per week.
Physics 1st ½ yr. Chem. 2d ½ year,	4
Graphics,	4= 2
Mathematics,	4
French,	3
Natural History,	2
English Lit. 1st ½ yr.	1=½
Mineralogy, Geology or Botany 2d ½ yr,	1=½
Elocution,	1
Rhetoric and Gomposition,	2
Elective,	3
	22

Elective Studies.

Engineering,	3
German,	3
Teaching (Theory 1, Prac. 4)	=3

SECOND YEAR OR SOPHOMORE STUDIES.

For the Degree of A. B.

	No. of ex. per week.
Latin,	4
Mathematics,	2
German,	3
English Literature (Lectures) 1st ½ yr.	1=½
History (Lectures) 1st ½ yr.	1=½
Botany (Class Work) 2d ½ yr.	2=1
Elocution 1st ½ yr.	1=½
Mineralogy, Geology or Botany (Lect's) 2d ½ yr.	1=½
Natural History,	2
Rhetoric and Composition,	2
Elective,	6
	22

Elective Studies.

Greek	3
French,	3
English,	3
Teaching (Theory 1, Prac. 4)	=3

For the Degree of B. L.

Candidates for this degree elect three periods of English, and do not take Latin or Greek. Instead of Latin are required:—

Physics and Chem. (Lectures) 4

The remaining studies are the same as above.

For the Degree of B. S.

	No. of ex. per week.
Mechanics,	2
Chemistry (Qual. Analysis)	4=2
Chemistry (Lectures)	1
Mathematics,	4
German,	3
English Literature (Lectures) 1st ½ yr.	1=½
History (Lectures) 1st ½ yr.	1=½
Botany (Class Work) 2d ½ yr.	2=1
Elocution 1st ½ yr.	1=½
Mineralogy, Geology or Botany (Lect's) 2d ½ yr.	1=½
Natural History,	2
Rhetoric and Composition,	2
Elective,	3
	22

Elective Studies.

Engineering,	3
French,	3
English,	3
Teaching (Theory 1, Prac. 4)	=3

THIRD YEAR OR JUNIOR STUDIES.

For the Degree of A. B.

	No. of ex. per week.
Latin,	4
Physics and Chemistry (Lectures)	4
History (Lect's) 1st ½ yr.	1=½
Mineralogy, Geology or Botany (Lect's) 2d ½ yr.	1=½
Rhetoric and Composition,	2
German,	3
Elocution,	1
Elective.	7
	22

Elective Studies.

Greek,	4
French,	3
Mathematics,	4
English,	3
Mechanics,	2
Graphics,	4=2
Chemistry (Practice 4 Lectures 1)	3
Free Hand Drawing,	4=2
Teaching (Theory 1, Prac. 4)	=3
History,	3

For the Degree of B. L.

Candidates for this degree take all the studies required above except Latin, Physics and Chemistry. The other required studies are:—

English,	4
French,	3
Elective,	8

A course in beginning Latin (4) is elective. Greek is not among the electives for this section.

For the Degree of B. S.

	No. of ex. per week.
Physics,	1
History (Lect's) 1st ½ yr.	1=½
Mineralogy, Geology or Botany (Lect's) 2d ½ yr.	1=½
Rhetoric and Composition,	2
German,	3
Elocution,	1
Elective (Courses I or II)	=22
	14

Elective Courses.

I. *Course in Engineering.*

Engineering,	3
Mechanics,	3
Graphics	6=2
Field, shop or office work	6=2
Mathematics	4

II. *Course in Chemistry.*

Chemical Philosophy 1st ½ yr.	3=1½
Organic Chemistry 2d ½ yr.	3=1½
French or English,	3
Quantitative Analysis,	12=4
Mathematics or Latin,	4

FOURTH YEAR OR SENIOR STUDIES.

For the Degree of A. B.

	No. of ex. per week.
Latin,	4
Geology,	1
History (Lect's) 1st ½ yr.	1=½
Elocution 2d ½ yr.	1=½
Mental Philosophy,	1
Rhetoric and Composition,	2
Elective,	13
	22

Elective Studies.

Greek,	4
Mathematics,	4
German,	3
French,	3
English,	3
Laboratory Chem. 12 or 6=6 or	3
Drafting and Shop Work, 12=6	
Teaching (Theory 1, Prac. 4)=3	
Free Hand Drawing, 6=3	
Physics,	1

For the Degree of B. L.

Candidates for this degree take all the studies required above except Latin. The other required studies are:—

English,	4
French,	3
German,	3
Elective,	7

A course in beginning Latin (4) is elective. Greek is not among the electives for this section.

For the Degree of B. S.

	No. of ex. per week.
French or German,	3
Geology,	1
History (Lect's) 1st ½ yr.	1=½
Elocution 2d ½ yr.	1=½
Mental Philosophy,	1
Rhetoric and Composition,	2
Elective (Courses I or II)	14
	22

Elective Courses.

I. *Course in Engineering.*

Engineering,	3
Mechanics,	3
Graphics,	6=3
Field and Shop Work,	6=2
Astronomy,	3

II. *Course in Chemistry.*

Chemical Technology,	3
Quantitative Analysis,	16=8
Astronomy (3) or Latin,	4

COURSES OF STUDY.

I.—COURSE IN MATHEMATICS.

Freshman Class.—The Scientific Section takes Olney's Algebra through Quadratic Equations, Davies's Legendre's Geometry Books v–vi, and Chauvenet's Plane Trigonometry.

The Classical and Literary Sections take Olney's Algebra through Quadratic Equations, and Davies's Legendre's Geometry Books iv–vi.

Sophomore Class.—The Scientific Section takes Davies's Legendre's Geometry Books vii–ix, Olney's Differential and Integral Calculus.

The Classical and Literary Sections take Davies's Legendre's Geometry Books vii–ix, and Wheeler's Plane Trigonometry.

Junior Class.—The Scientific Section takes Todhunter's Conic Sections, Olney's Higher Algebra, and Chauvenet's Spherical Trigonometry.

The Classical and Literary Sections may elect this course.

Senior Class.—The Scientific Section takes Chauvenet's Spherical and Practical Astronomy.

Those in the Classical and Literary Sections, who are qualified, may elect this course.

II.—COURSE IN NATURAL HISTORY.

The instruction in this department consists of lectures and recitations, as follows:

1. **Comparative Anatomy and Physiology.**—A course of lectures extending through two years, once a week. Required of all the sections of the Freshman and Sophomore classes.

2. **Botany.**—Recitations and analysis of plants, two periods per week last half year. Required of all the sections of the Sophomore Class.

3. **Botany, Mineralogy and Geology.**—Lectures once a week last half year. These subjects are given in successive years. Required of all sections of the Freshman, Sophomore and Junior Classes.

4. **Geology.**—Lectures and Recitations once a week throughout the year. Required of all sections of the Senior Class. Dana's Geology is used as a text book.

The Museum of the College affords ample material for illustrating the instruction in this course.

III.—COURSE IN PHYSICS AND CHEMISTRY.

The instruction in this department embraces the following subjects:

1. **Physics.**—A course of lectures, four periods per week first half-year. Required of the Scientific Section of the Freshmen Class, the Literary Section of the Sophomore Class, and the Classical Section of the Junior Class.

2. **Chemistry.**—Lectures on Inorganic Chemistry and some of the more important of the Carbon compounds. Four periods per week last half-year. Required of the Scientific Section of the Freshman Class, the Literary Section of the Sophomore Class, and the Classical Section of the Junior Class.

3. **Qualitative Chemical Analysis.**—Four periods of practice per week, and one of Lectures and Recitations; first half-year. Required of the Scientic Section of the Sophomore Class, and elective for others.

4. **Determinative Mineralogy.**—Four periods of practice per week, and one of Lectures and Recitations; last half-year. Required of the Scientific Section of the Sophomore Class, and elective for others.

5. **Physics.**—Heat, Optics, Electricity. One period per week. Required of the Scientific Section of the Junior Class. It is intended to supplement this instruction by Laboratory Practice as soon as a room suitable for the purpose can be provided.

6. **Chemical Philosophy.**—Cooke's Chemical Philosophy. Three periods per week, first half-year. Required of those scientific students in the Junior Class who do not elect Engineering.

7. **Organic Chemistry.**—Lectures and Recitations; three periods per week, last half-year. Pinner's Organische Chemie. Required of the scientific students of the Junior Class who do not elect Engineering.

8. **Chemical Technology.**—Lectures and Recitations; three periods per week. Required of the scientific students in the Senior Class who do not elect Engineering.

9. **Quantitative Chemical Analysis.**—This course extends over two years, with twelve periods per week the first year, and fourteen the second. It is required of the scientific students in the Junior and Senior Classes, who do not elect Engineering. It includes Gravimetric Analysis, Volumetric Analysis, the analysis of Minerals, Ores, Soils, Fertilizers, Commercial Products, Water Analysis, Organic Analysis, and Assaying. Seniors of the classical and literary sections may elect as much of this course as their time will permit.

In addition to the above regular work, we offer, for the benefit of those intending to teach, an opportunity to perform a series of experiments suitable to illustrate elementary instruction in Chemistry.

For the benefit of those who intend to study Medicine or Pharmacy after graduation, the course is modified so as to include the elements of Medical Chemistry. To such students, our regular scientific course, with its two years of Latin and three years of Chemistry, is especially recommended.

The Chemical Laboratory has been fitted up in the most approved manner, each desk being provided with running water, gas and sink. It is heated by steam, and furnished with hoods, sand, steam and air baths, furnaces, balances, a good microscope, spectroscope, etc., suitable for carrying on all ordinary Laboratory work.

Students will be charged only for chemicals and apparatus actually used up. No charge is made for gas.

Books of Reference.—Besides the scientific books in the College Library, about one hundred volumes of standard works on Chemistry and Physics are constantly accessible to students in this department.

IV.—COURSE IN HISTORY.

1. A course of twenty lectures in History is given each year. This is a three years' course, and embraces American, English, Grecian, Roman, and General History.

All students of the Sophomore, Junior, and Senior classes are required to attend these lectures, and are examined in the same.

2. A course in Roman History three times a week, is elective for the Classical and Literary sections of the Freshman class. Liddell's History of Rome (Students' Series), is used as a text book.

3. A course in the "Decline and Fall of the Roman Empire" the first half-year, and in French History the last half-year, three times a week is required of the Literary section and elective for the Classical section of the Junior class. Schmitz's Manual, Students' Gibbon, and Students' History of France, are used as text books.

In the regular class work, history is taught by lectures, recitations, and by frequent essays required of the students upon different historical subjects. In connection with their essays, students make constant reference to the biographical and classical dictionaries, encyclopedias, and larger histories in the College library. The students are urged to read such standard works as bear directly upon the great characters and events of the history which they study.

V.—COURSE IN ENGLISH.

The instruction in this department consists of Lectures, Readings and Recitations, as follows:

1. Rhetoric and Composition, one exercise per week, with constant practice in writing essays. This work is required of all students through the entire four years.

2. A course in English Etymology, twice a week, required of the Literary Section of the Freshman Class.

3. A course of critical reading in authors of the Nineteenth century, twice a week, required of the Literary Section of the Freshman Class.

4. A course of critical reading in authors prior to the Nineteenth century, from Chaucer down, three times a week, and extending through three years. This course is required of the Literary Sections of the Sophomore, Junior and Senior Classes, and elective for other students in these classes.

5. A course of twenty lectures on English Literature. Attendance upon these is required of all students of the Freshman and Sophomore Classes.

VI.—COURSE IN GERMAN.

The full course of instruction in this department extends through four years, two of which are required of candidates for the degree of A. B. or B. S., with the privilege of electing the remaining two. The study is required for the four years, of candidates for the degree of B. L. The course of study is as follows:

First Year.—German Grammar, with constant practice in writing exercises; reading of German ballads and easy prose; conversational exercises.

Second Year.—Stories—Aus dem Leben eines Taugenichts; German plays—Eigensinn, Einer muss heirathen etc.; exercise in writing German; conversation.

Third Year.—Schiller's Wilhelm Tell, Maria Stuart, etc.; dictation; writing; conversation.

Fourth Year.—Goethe or Lessing; Schiller's Prose; studies in the history of German Literature; conversation and writing.

VII.—COURSE IN FRENCH.

The full course in French extends over four years, with about one year's study required for admission. The work is arranged as follows:

First Year.—Magill's Grammar; Fénelon's Télémaque. Required of all sections of the Freshman Class.

Second Year.—Magill's Grammar; Magill's Prose and Poetry. Elective for all sections of the Sophomore Class.

Third Year.—Magill's Grammar; Bôcher's College Series of Plays; Dumas's Napoleon, etc. Required of the Literary Section of the Junior Class; elective for the other sections.

FOURTH YEAR.—Magill's Grammar; Corneille's Cid; Racine's Athalie; Molière's Misanthrope, etc.; Familiar Lectures in French on French Literature. Required of the Literary Section of the Senior Class, and elective for the other sections.

All the classes have regular practice in French conversation. An extra class is formed of the more advanced students. In this class all the instruction and explanations are given in French, the students joining in the critical discussion of the classics read.

VIII.—COURSE IN MECHANICS AND ENGINEERING.

This course is especially intended to give a good preparation to those students who are expecting to become either Civil or Mechanical Engineers. The studies and exercises are so arranged that its graduates will be prepared to become immediately useful in the office, works, or field, in subordinate positions, and, after a fair amount of such practice, to design and to take charge of important works.

The College is well provided with the necessary field instruments, and each student is made familiar with their uses and management, by practical work in the field, carefully planned to illustrate the actual practice of the engineer.

The draughting-room is well lighted, warmed, and ventilated, and is furnished with adjustable tables, models, drawings, etc.

The mechanical laboratory contains an excellent and complete assortment of tools, including a screw-cutting engine-lathe, two speed-lathes (one back-geared), an iron planer, a complete universal milling machine, an upright drill, emery grinder, etc., besides a forge, and the many necessary small tools. Additions are constantly being made to this collection, as they are needed, either by manufacture in the laboratory or by purchase. Power is furnished by a four-horse power engine and boiler, the former fitted with an approved indicator, and the latter with the necessary attachments for determining its efficiency, etc.

Regular and systematic instruction is given in the use of tools, machinery, and processes. Patterns are made by the students from their own designs and drawings, of machines, or parts of machines, and the castings are properly fitted together and finished according to the drawings.

Although, as above stated, the course is especially intended for those who expect to become Engineers, such portions of it as may be pursued with advantage by others, whose time is limited and who do not intend to graduate, are open to them.

The details of the course vary somewhat from year to year, but, in general, are represented by the following arrangement of the studies:

FRESHMAN YEAR.—The Elements of Draughting, including the use of instruments, India ink and colors, followed by Elementary Projections, Elements of Structures, Shades and Shadows, and Isometrical Drawing, are taught as a required exercise to the Scientific Section of

the class, and are elective for others. At the same time a more extended course in the same, with recitations, and the construction in wood and metal of models of the more difficult drawings is required of the Engineering students only.

This is followed by Surveying with the Chain and Compass, in the Spring.

SOPHOMORE YEAR.—Analytical Mechanics of Solids and Fluids is taught as a required study to the Scientific Section of the class, and as an elective to others, throughout the year. Descriptive Geometry, including Shades, Shadows, and Perspective, and the careful construction of the more important problems, is required of Engineering students, and is elective for others. It is followed in the Spring by Land Surveying, with Field Practice and Map Drawing. Instruction in the use of tools is begun, and Models illustrative of the problems in Descriptive Geometry are required to be made.

JUNIOR YEAR.—The Junior and Senior Classes are united during the remainder of the course, thus forming one Engineering Class, and the remaining studies and exercises of the course are so distributed as to occupy the two years, they being repeated during alternate years. The details are given under Senior Year.

SENIOR YEAR.—The following are the studies and exercises required of the Senior and Junior Classes:

1. *Engineering.*—Theory, Adjustment, and Use of Engineering Field Instruments; Leveling; Topographical, Triangular and Hydrographical Surveying; Theory and Practice of Road Engineering; Building Materials; Stability of Structures; Foundations and Superstructures; Bridge Construction.

2. *Applied Mechanics.*—Friction and other resistances; Stress and Strength of Materials; Practical Hydraulics; Practical Pneumatics; General Theory of Mechanics; Theory of Prime Movers, Steam Engines, Turbines, etc.; Measurement of Power.

3. *Mechanism.*—Principles of Mechanism, of Machine Design, of the Transmission of Power; Construction and Use of Tools.

4. *Draughting.*—Stone-Cutting Problems; Topographical, Structure and Machine Drawing; Plans, Profiles, and Sections of Road Surveys; Working Drawings.

5. *Practical Exercises* in the Field, in the early Fall and late Spring months; in Pattern Making and general Machine-Shop Practice, including the Forging, Shaping, Tempering, Use and Care of Tools, the Filing, Turning, Planing, Boring, &c. of Metals, the Finishing and Fitting Up of Machines or parts of Machines, the Setting Up, Testing, and Management of Steam Engines, Boilers and Machinery, throughout the year; with occasional visits to Mechanical Establishments in or near Philadelphia.

IX.—COURSE IN ELOCUTION.

Regular exercises in Elocution are required once a week of all classes, in which instruction is given in the theory of elocution, combined in practice with vocal gymnastics and voice culture; and in reading.

The discipline in Oratory consists in instruction in the theory and practice of gesture, position, etc., and in frequent declamations before the class.

The public Rhetorical Exercises of the college are the Junior Exhibition in the Fifth Month and the Annual Commencement in the Sixth Month, and several Public Days, distributed throughout the year.

First Year.—Murdock and Russell's Vocal Culture, Coates's Speaker, Declamations before the class, and one Public Day Exercise before all the classes.

Second Year.—Russell's American Elocutionist, Declamations, and one Public Day Exercise.

Third Year.—Russell's American Elocutionist, Declamations every two weeks and one Public Day Exercise.

Fourth Year.—Public Day Exercises and Commencement.

X.—COURSE IN TEACHING.

This course is open to the members of all the College classes (being an Elective in each), as well as to special students.

It offers the superior inducement of *practice* as well as lectures, whereby the pupil teacher can immediately test the knowledge gained, and by entering into the practical work of teaching, under the direction of the teacher in charge, can also gain somewhat of the *experience* and *self-confidence* so necessary to after success.

At present there are two lectures per week, and two periods (with as many more as the pupil may desire), given to practice or observation.

The full course occupies three years, for which a diploma is given; but those taking only one or two years are entitled to a certificate showing the amount of work done in this department, as well as their progress in their college studies.

As a young teacher who has received a practical training under the direction of a teacher of experience has decidedly the advantage over one who has not, it is to be hoped that all of our students who intend to be teachers will avail themselves of the opportunity here offered.

XI.—COURSE IN LATIN.

The study of Latin is required of Classical Students during the four years of the College course.

In the Chemical course Latin is Elective with Mathematics in the Junior year, and with Astronomy in the Senior year. The third and

fourth year's work is pursued together as a two years' course, by the Senior and Junior classes combined. The course of Instruction is as follows:

First Year.—Harkness's Grammar and Latin Prose Composition; Virgil's Ænead; Livy.

Second Year.—Harkness's Grammar aud Latin Prose Composition; Cicero's Orations; Livy.

Third Year.—Horace's Odes; Cicero's De Claris Oratoribus; De Oratore, De Senectute, and De Amicitia.

Fourth Year.—Horace's Satires and Epistles; Tacitus's Agricola and Germania; Satires of Juvenal; Selections from Lucretius.

XII.—COURSE IN GREEK.

Greek is not a required study, but is Elective for students of the Classical course. Each year opportunity is offered for beginners in the language, and students who have previously studied it go on in advanced classes. The full course extends through four years, with three recitations per week during the Freshman and Sophomore years, and four recitations per week during the Junior and Senior years. The course of Instruction is as follows:—

First Year.—Goodwin's Grammar; Xenophon's Anabasis.

Second Year.—Fernald's Greek Historians; Homer's Iliad or Odyssey; Greek Prose Composition; Goodwin's Greek Moods and Tenses.

Third Year.—Plato's Phaedo or Apology of Socrates; The Hecuba or Medea of Euripides; Greek Composition.

Fourth Year.—The Antigone of Sophocles or the Prometheus of Æschylus; Demosthenes on the Crown or Lysias or Isocrates; History of Greek Literature (Lectures).

XIII.—COURSE IN MENTAL AND MORAL PHILOSOPHY.

The instruction in this department is given by lectures once a week, with occasional examinations. Attendance is required of all sections of the Senior class. The subject is presented historically, with outlines of the different schools of Philosophy.

The library contains a number of works upon this subject to which students are constantly referred.

Special Students, and others not candidates for a degree, who shall complete one or more of the above courses of study, may receive a certificate to that effect upon the recommendation of the Professors in charge of the departments specified.

Post Graduate Studies and Second Degrees.

Graduates of this and other Colleges are offered facilities for continuing their studies. They must arrange their hours and their work with the Professors in charge of the Departments which they propose to elect.

Such students, who continue their studies satisfactorily for one year, and present a suitable thesis, will receive the Master's Degree.

The Second Degrees are also conferred upon the following conditions:—

The Degree of A. M. will be given, three years after graduation, to all Bachelors of Arts who shall have engaged, during that period, in professional or literary studies, and who shall present an acceptable thesis.

The Degree of M. L. will be given, three years after graduation, to all Bachelors of Literature who shall have engaged, during that period, in professional or literary studies, and who shall present an acceptable thesis.

The Degree of M. S. will be given, three years after graduation, to all Bachelors of Science who shall have engaged, during that period, in professional or scientific studies, and who shall present an acceptable thesis upon some scientific subject.

The Degree of C. E. will be given, three years after graduation, to all Bachelors of Science of the Engineering Department who shall have engaged, during that period, in professional practice, and who shall present an acceptable thesis upon a subject pertaining to Civil Engineering.

Applications for the Second Degree must be made, and the thesis presented, at least *three months* before Commencement.

GENERAL INFORMATION.

SITUATION.

THE COLLEGE is situated on the West Chester and Philadelphia Railroad, ten miles from Philadelphia. Cars leave the depot at Thirty-first and Chestnut Streets, Philadelphia, twelve times daily.

POST-OFFICE ADDRESS AND CITY OFFICE.

The Post-office address is SWARTHMORE, DELAWARE CO., PA. Express packages may be sent to this address, or, *if small*, may be left in care of Friends' Book Association, 706 Arch Street, Philadelphia.

BUILDINGS AND GROUNDS.

The College property contains 240 acres, of which about one-half is devoted to the farm, and the remainder consists of lawn and pleasure grounds. Crum Creek, which forms the west boundary of the property, furnishes excellent facilities for boating, bathing and skating. The Main Building, a massive stone structure 348 feet long and four stories high, contains the living rooms of the Students and Instructors, and the Lecture and Recitation rooms. It is heated throughout by steam, and lighted by gas, and supplied with spring water, and bath rooms on every floor.

In the rear of the main building is the Laundry, also of stone, and containing in addition the Root Sectional Safety Boilers for heating and cooking purposes, the Bakery, and the servants' rooms.

The Gymnasium, a frame building, 80x40, contains also temporarily the Mechanical Laboratory and the Draughting Room of the Engineering Department.

A commodious stone Meeting House, at a convenient distance, has recently been built through the generous liberality of a member of the Board of Managers.

The other buildings are the President's House, the West House (the birth-place of Benjamin West, and now used as a Professor's residence), the Farmer's House, and commodious farm buildings, all constructed of stone.

The erection of an additional building for the better accommodation of the scientific and practical work of the College is in contemplation, and it will be completed at an early day. It will contain all the laboratories and lecture rooms needed, each fitted up in the most approved manner for its special use.

LIBRARIES.

The Libraries of the College now contain over four thousand volumes. Each department of study is supplied with a good and steadily increasing library of reference. The General Library is accessible to all the students, according to the rules established by the Faculty, and is open four times a week during term-time for the delivery of reading books, and daily for the delivery of books of reference needed by the students. It is open at all times to teachers and members of the household.

Friends' Historical Library of Swarthmore, founded by Anson Lapham, which contains a small but increasing collection of Friends' books, photographs of representative Friends, and manuscripts relating to the Society and its history, is at all times accessible to teachers, students, and members of the household.

READING ROOM.

The Reading Room is supplied with the leading Literary and Scientific journals, and the prominent newspapers of the principal cities, and is open to students at all times except during the regular hours for study and recitations.

LITERARY SOCIETIES.

There are three Literary Societies maintained by the students, two for young men, and one for young women. These hold regular meetings for the reading of Essays, etc., and for practice in debates. Their Libraries, under their own management, contain over twelve hundred volumes, and are accessible to all of the College students.

MUSEUM.

The Museum of the College, intended to illustrate the course of instruction in Natural History, consists of collections in the departments of Mineralogy, Conchology, Botany and Zoology. It contains a choice collection of minerals, and a fair collection of shells, rocks and fossils. The Zoological Cabinet is supplied with characteristic specimens illustrative of most of the classes and orders of animals, and mainly by examples from our own country. The Cabinet thus contains a good collection of our native birds, the smaller mammals, many reptiles, a few fishes, numerous mollusks and insects, and a few specimens of nearly all the orders of invertebrates. The Museum is constantly growing, especially by the addition of more familiar forms of animals, which are best adapted for illustration and instruction in Zoology. It is under the care of Dr. Joseph Leidy, of Philadelphia, who delivers lectures upon Natural History once a week throughout the year, and twice a week during the Spring months.

PHYSICAL CULTURE.

Regular daily exercise in the open air is encouraged, for which the extensive grounds connected with the College afford ample facilities. The Gymnasium, under the care of the Students' Athletic Association, is open at certain hours each day for the exercises of the boys and young men; and a large airy room in the Main Building is set apart for the exercises of the girls and young women.

RELIGIOUS EXERCISES.

While care is taken to inculcate the doctrine that religion is a matter of practical daily life, and is not confined to the observance of set forms or the promulgation of religious tenets, the regular assembling for religious purposes is carefully observed. On First-day morning a religious meeting is held, attended by students, teachers, and members of the household, and occasionally by visiting Friends. The meeting is preceded by First-day school exercises, consisting of the recitation of passages of Scripture prepared by members of the different classes, and the reading of a portion of Scripture at the close. The daily exercises are opened by a general meeting for reading selected portions of Scripture, or other suitable books, and imparting such moral lessons as circumstances seem to require, followed by a period of silence before entering upon the duties of the day.

VISITING AND LEAVE OF ABSENCE.

Students should not be visited at the College on the FIRST DAY OF THE WEEK.

Leave of absence cannot be granted without a written request from parents or guardians, which request should, in all cases, be accompanied by reasons satisfactory to the Faculty.

Students may be visited, on week-days, by parents or guardians, or by near relatives, or others approved by parents or guardians; but general visiting is discouraged. *Students must not be interrupted in their studies or recitations at any time.*

All persons who are interested in education, and who are desirous of examining the methods of instruction and discipline at Swarthmore, will be welcomed at any time, and should, when convenient, communicate with the President upon the subject in advance.

COMMENCEMENTS AND VACATIONS.

The College year begins on the second Third-day of Ninth month, and closes with Commencement-day, which occurs on the third Third-day of Sixth month.

Students are not admitted for a period terminating earlier than the current college year, but, when vacancies exist, may enter at any time during the year, if prepared to join existing classes.

Besides the summer vacation there will be a vacation of one week at the close of the Twelfth month, and one of a few days in the Fourth month. (See calendar.)

Students are permitted to remain at the College, under care, during the Spring and Winter recess, but not during the summer vacation.

OUTFIT.

Although no form of dress is prescribed for either sex, such simple attire as is appropriate to school life is earnestly recommended. Earrings, bracelets, necklaces, and elaborately trimmed dresses are prohibited.

Students should be supplied with six towels, six napkins, two clothes-bags, a wrapper, slippers, umbrella, and the requisite toilet articles. Every article must be marked with the full name of the owner.

USE OF TOBACCO.

The use of Tobacco being strictly prohibited, those addicteb to its use, unless prepared to renounce it entirely, should not apply for admission.

EXPENSES.

For resident students the price of board and tuition is $350 per year, of which $200 is payable in advance, and $150 on the first of First month. A proportionate deduction is made to those students who enter after the opening of the College year.

For day scholars the price is $200 per year, of which one-half is payable in advance, and the remainder on the first of First month. The day scholars dine with the resident students.

Books are furnished for the use of students without expense, but they buy their own stationery and drawing implements. Students in Practical Chemistry pay for the chemicals which they use in the Laboratory. No additional charge is made in case of sickness unless a physician is employed.

There are no extra charges.

The price being made as low as experience shows to be compatible with prudence, while many of our expenses are annual in their character, and teachers and other officers at fixed yearly salaries must be engaged in proportion to the number of students entered, we cannot, in case of withdrawal, return the full proportionate amount paid, without loss. When the connection of a student with the College shall terminate before the end of the period for which payment has been made, by sickness, or any other cause, approved by the Faculty, the student may have the privilege of sending an approved substitute, for the unexpired term, or may apply, in writing, to the Treasurer, and a return will be made at the rate of $25 per month, from the date of said application or written notice that the place is vacated.

PAYMENTS.

Payments are to be made by check or draft to the order of

ROBERT BIDDLE, Treasurer,

No. 511 Commerce Street, Philadelphia.

STUDENTS.

RESIDENT GRADUATES.

Florence Hall, A. B.	Swarthmore, Pa.
Edward H. Keiser, B. S.	Swarthmore, Pa.

SENIOR CLASS.

CLASSICAL SECTION.

Magill. Gertrude, B.	Swarthmore, Pa.
Paulin, Eugène	Swarthmore, Pa.
Reinœhl, Martha E.	Lebanon, Pa.
Tucker, Ernest F.	New York City, N. Y.

LITERARY SECTION.

Bunting, Martha	Sharon Hill, Pa.
Canby, Wm., Jr.	Baltimore, Md.
Doron, Chas. B.	Germantown, Pa.
Elliott, Mary J.	Philadelphia, Pa.
Kirk, Emma	Bryn Mawr, Pa.
Shoemaker, Alvin T.	Baltimore, Md.

SCIENTIFIC SECTION.

Rushmore, Edward C.	Cooksburg, N. Y.
Seaman, Henry B.	Brooklyn, L. I.
Sharpless, Charles E.	Media, Pa.
Thomas, I. Byron	Cheyney, Pa.

JUNIOR CLASS.

CLASSICAL SECTION.

Baner, W. Llewellyn	New York City, N. Y.
Blackwell, Edith B.	Somerville, N. J.
Browning, Chas. R.	Orange, N. J.
Butler, Wm., Jr.	West Chester, Pa.

Clayton, Samuel L.	Chester, Pa.
Foulke, P. Fannie	Buckingham, Pa.
Gale, Mary E.	Laconia, N. H.
Green, Sarah S.	Media, Pa.
Hallowell, Margaret E.	Philadelphia, Pa.
Palmer, Charles	Concordville, Pa.
Reeves, Lizzie T.	Philadelphia, Pa.
Rossiter, Horace L.	Spring House, Pa.
Weaver, Gerrit H.	Philadelphia, Pa.
Wilson, Emily E.	Lincoln, Va.
Zavitz, Edgar M.	Coldstream, Ont., Can.

LITERARY SECTION.

Brewster, Lottie E.	Rahway, N. J.
Caley, Joseph M., (Irr.)	Newtown Square, Pa.
Cooper, Bertha	Phœnixville, Pa.
Hart, Elizabeth E., (Irr.)	Doylestown, Pa.
Haslam, Elizabeth	Atglen, Pa.
Ogden, Elizabeth M.	West Chester, Pa.

SCIENTIFIC SECTION.

Lukens, Nathan	Upper Darby, Pa.
Moore, Joseph T., Jr.	Sandy Spring, Md.
Phillips, George C.	Philadelphia, Pa.
Turton, Charles B.	New York City, N. Y.

SOPHOMORE CLASS.

CLASSICAL SECTION.

Angell, Caroline M.	Ghent, N. Y.
Cochran, C. Herbert	Street Road, Pa.
Downing, Henry M.	West Chester, Pa.
Gould, Ada C.	Wilmington, Del.
Hanes, Florence N.	Woodstown, N. J.
Hawkins, Vallandingham	Fawn Grove, Pa.
Hornor, Louisa S.	Philadelphia, Pa.
Jackson, Alice W.	Wilmington, Del.

Miller, Guion	Sandy Spring, Md.
Mitchell, S. Duffield	West Chester, Pa.
Pennock, Edward A.	London Grove, Pa.
Pyle, Helen C.	Wilmington, Del.
Webb, Emma.	Philadelphia, Pa.

LITERARY SECTION.

Allen, Virginia, (Irr.)	Germantown, Pa.
Bardsley, Elizabeth E., (Irr.)	Philadelphia, Pa.
Conrow, Edgar	Cinnaminson, N. J.
Gould, Ada C., (Irr.)	Wilmington, Del.
Haviland, Annie	Yonkers, N. Y.
Matlack, Bertha	Camden, N. J.
Parrish, Richard V., (Irr.)	Philadelphia, Pa.
Smith, Sara H., (Irr.)	Lincoln, Va.
Taylor, Annie E.	Denton, Md.
Verree, James E.	Verreeville, Pa.
Wood, Louisa C.	Swarthmore, Pa.
Woodnutt, Clement A.	Philadelphia, Pa.

SCIENTIFIC SECTION.

Black, George W.	Bordentown, N. J.
Bunting, Charles A.	Sharon Hill, Pa.
Cline, George A.	Roslyn, L. I.
Kissam, William A., Jr.	Little Neck, L. I.
Knox, William S.	Washington, D. C.
Loeb, Ferdinand G.	Philadelphia, Pa.
Macy, Everett	New York City, N. Y.
Pennock, George L.	Philadelphia, Pa.
Pyle, Charles S.	West Grove, Pa.
Read, Alfred H. Jr.	Norristown, Pa.
Seaman, Frederick A., Jr.	Madison, N. J.
Sharpless, David	West Chester, Pa.
Thorne, Edward G.	Yonkers, N. Y.
White, John J.	Denton, Md.

FRESHMAN CLASS.

CLASSICAL SECTION.

Baker, Mattie A., (Irr.)	Easton, New York.
Cornell, A. Jennie, (Irr.)	Sparta, Ont., Canada.
Cutler, Anna M., (Irr.)	Unionville, Pa.
De Normandie, Myra	Kingston, Mass.
Dowdall, Lillie J.	Avondale, Pa.
Frame, Emlen P.	New York City, N. Y.
Griest, Ella M.	Flora Dale, Pa.
Hall, Sarah L.	Philadelphia, Pa.
Hancock, Henry J.	Philadelphia, Pa.
Hughes Mary L.	Hughesville, Va.
Moore, Frederick P.	Sandy Spring, Md.
Morey, Nettie E.	Nassau, N. Y.
Porter, Ella B.	Titusville, Pa.
Rossiter, Uriah P.	Girard, Pa.
Satterthwaite, Laura H.	Trenton, N. J.
Thomas, Ruth K.	King of Prussia, Pa.
Turner, Gertrude T., (Irr.)	Washington, D. C.
Willets, Mary	Jericho, L. I.

LITERARY SECTION.

Baldwin, Ida L., (Irr.)	Philadelphia, Pa.
Betts, Josephine, (Irr.)	Wilmington, Del.
Caley, Mary M., (Irr.)	Newtown Square, Pa.
Coles, Margaret	Harrisonville, N. J.
Dowdall, Wm. F.	Avondale, Pa.
Downing, Rebie M.	Philadelphia, Pa.
Forsyth, Anna L.	Pemberton, N. J.
Franklin, Minnie, (Irr.)	New York City, N. Y.
Gossler, Katharine	Columbia, Pa.
Greer, Annie N.	Philadelphia, Pa.
Hallowell, Anna	Huntingdon Valley, Pa.
Johnston, Linda L., (Irr.)	Philadelphia, Pa.
Kemp, Annie	Easton, Md.
Lynde, Frank E. P., (Irr.)	Philadelphia, Pa.
Richardson, Elizabeth C., (Irr.)	Byberry, Pa.
Stevens, Bessie, (Irr.)	Reading, Pa.
Thompson, Mary I.	Philadelphia, Pa.
White, Elizabeth	Denton, Md.

SCIENTIFIC SECTION.

Ash, Henry C.	Philadelphia, Pa.
Baum, David A.	Lincoln, Nebraska.
Caldwell, Frank G.	Philadelphia, Pa.
Dill, William R., (Irr.)	Richmond, Ind.
Dilworth, Horace L.	Centreville, Del.
Earle, Arthur H.	Germantown, Pa.
Fowler, Geo. R.	Cienfuegos, Cuba.
Grier, R. Henry, (Irr.)	Salem, N. J.
Hallowell, Wm. P.	Philadelphia, Pa.
Haviland, Edwin	New York City, N. Y.
Hoopes, Russell	West Chester, Pa.
Kirk, Samuel	Newtown Square, Pa.
Patterson, Frank E.	Philadelphia, Pa.
Patterson, Henry L.	Philadelphia, Pa.
Swank, James M.	Philadelphia, Pa.

SUMMARY.

Resident Graduates	2
CLASSICAL DEPARTMENT.	
Senior Class	4
Junior Class	15
Sophomore Class	12
Freshman Class	18
LITERARY DEPARTMENT.	
Senior Class	6
Junior Class	6
Sophomore Class	12
Freshman Class	18
SCIENTIFIC DEPARTMENT.	
Senior Class	4
Junior Class	4
Sophomore Class	14
Freshman Class	15
Total	130

GRADUATES.

CLASS OF 1873.

Sarah H. Acton, A.B.	Salem, N. J.
Helen Magill, Ph. D.	Newnham College, Cambridge, Eng.
Elizabeth C. Miller, A.B.	Swarthmore College.
Esther T. Moore, A.B.	Swarthmore College.
*Maria C. (Pierce) Green, A.B.	Swarthmore College.
Lowndes Taylor, A.B.	Colorado Springs, Col.

CLASS OF 1874.

Ellen H. (Evans) Price, A.B.	Philadelphia, Pa.
Amy W. (Hall) Hickman, A.B.	Street Road, Pa.
*Alfred T. Haviland, B.S.	Millbrook, N.Y.
Mary (Hibbard) Thatcher, A.B.	Hulmeville, Pa.
Herman Hoopes, C.E.	Philadelphia, Pa.
Ferris W. Price, A.B.	Philadelphia, Pa.
Elizabeth S. (Woolston) Collins, A.B.	Bristol, Pa.

CLASS OF 1875.

John B. Booth, A.B.	Chester, Pa.
Helen T. Comly, A.B.	Philadelphia, Pa.
Franklin H. Corlies, B.S.	Philadelphia, Pa.
*Herbert G. Dow, A.B.	Brooklyn, N. Y.
Lizzie (Hanes) Taylor, A.B.	Woodstown, N. J.
Edith R. (Hooper) Roberts, A.B.	Titusville, Pa.
Barton Hoopes, Jr., B.S.	Philadelphia, Pa.
*Oliver Keese, Jr., B.S.	Titusville, Pa.
J. Reece Lewis, B.S.	Media, Pa.
Howard W. Lippincott, A.B.	Philadelphia, Pa.
Martha (McIlvain) Eastwick, A.B.	Philadelphia, Pa.
John K. Richards, A.B.	Ironton, Ohio.
William H. Ridgway, C.E.	Coatesville, Pa.

*Deceased.

CLASS OF 1876.

Frank L. Bassett, B.S., D.D.S.,	Philadelphia, Pa.
Arthur W. Bradley, A.B.	Philadelphia, Pa.
Frances Linton, A.B.	West Chester, Pa.
Elizabeth J. Longstreth, A.B.	Sharon Hill, Pa.
James T. McClure, B.S.	Pittsburg, Pa.
Emma McIlvain, A.B.	Philadelphia, Pa.
Edwin Mitchell, Jr., A.B.	Providence, R. I.
Lucy R. Price, A. B.	West Chester, Pa.
Isaac G. Smedley, B.S., M.D.,	Philadelphia, Pa.
Herbert W. Smyth, A.B.	Heidelberg, Germany.
Marv Willets, A.B.	Maiden Creek, Pa.
William P. Worth, B.S.	Coatesville, Pa.

CLASS OF 1877.

Joseph T. Bunting, B.S., LL.B.	Philadelphia, Pa.
Norman B. Corson, A.B.	Norristown, Pa.
Eudora Magill, A.B.	Swarthmore, Pa.
Jesse R. Norton, A.B.	Ironton, O.
Carroll R. Williams, A.B., LL.B.	Philadelphia, Pa.
Florence M. Yeatman, A.B.	Fairville, Pa.

CLASS OF 1878.

Caroline E. Burr, A.B.	Germantown, Pa.
Maybell P. Davis, A.B.	Lancaster, Pa.
Howard Dawson, A.B.	Boston, Mass.
Tacy A. Gleim, A.B.	Lancaster, Pa.
William J. Hall, B.S.	West Chester, Pa.
Mary P. Hallowell, A.B.	Davis Grove, Pa.
Charles A. Hawkins, A.B.	Fawn Grove, Pa.
William P. Holcomb, B.L.	Swarthmore College.
Rebecca S. Hunt, A.B.	Philadelphia, Pa.
Anna E. Jackson, A. B.	Kennett Square, Pa.
Llewellyn H. Johnson, B.S.	Orange, N. J.
Edward Martin, A.B.	Philadelphia, Pa.
Francis J. Palmer, B.S.	Brooklyn, L. I.
Israel Roberts, B.S.	Fellowship, N. J.
William Seaman, B.S.	Phœnixville, Pa.
C. Harry Shoemaker, B.S.	Philadelphia, Pa.

CLASS OF 1879.

Isaac R. Coles, C.E.	Glen Cove, N. Y.
William P. Fender, A.B.	Philadelphia, Pa.
William Lea Ferris, A.B.	Wilmington, Del.
Joseph Fitch, A.B.	Flushing, L. I.
Ruth Anna Forsyth, A.B.	Crosswicks, N. J.
Elizabeth Furnas, B.L.	Springboro, Ohio.
P. Lesley Hopper, A.B.	Havre de Grace, Md.
Marie A. Kemp, A.B.	Denver, Colorado.
Elisha E. Lippincott, B.S.	Red Bank, N. J.
Samuel Craig McComb, B.S.	Reading, Pa.
Charles R. Miller, B.L.	Philadelphia, Pa.
Josephine White, A.B.	Yardleyville, Pa.
Abby M. Woodnutt, B.L.	Philadelphia, Pa.

CLASS OF 1880.

Anne E. Constable, A.B.	Philadelphia, Pa.
Florence Hall, A.B.	Swarthmore College.
Myra T. Hillman, A.B.	Washington, D. C.
Emily L. Hough, A.B.	Minneapolis, Minn.
Edward H. Keiser, B.S.	Swarthmore College.
Georgeine Kurtz, A.B.	Reading, Pa.
Albert R. Lawton, A.B.	New York City, N. Y.
Robert J. Marcher, B.S.	High Bridge, N. Y.
Thomas L. Moore, A.B.	Sandy Spring, Md.
Ellen M. Preston, A.B.	Lancaster, Pa.
John Turton, B.S.	New York City, N. Y.
Fannie A. Willets, A.B.	Trenton, N. J.
Henry S. Wood, B.S.	New York City, N. Y.

PREPARATORY SCHOOL.

GENERAL STATEMENT.

This school is intended to prepare students for the Freshman Class in the College, or to furnish a good practical education to those desiring a shorter course. Most of the studies pursued are required of all, but few being optional, as experience has clearly shown that young students make much more satisfactory progress when pursuing a regularly required course, even for a single year, without any idea of graduation, than when they select all their studies for themselves. The course of study in this school, while it is an essential preparation for the departments of the College, is also believed to be the best training for those whose means and circumstances require that they should finish their studies in the Preparatory School, or before reaching the end of the College course. Attention is invited to the course of study as here arranged, and the various Preparatory Schools of Friends throughout the country are requested to conform to it, as far as practicable, and to prepare students to enter our Freshman Class, either in the Classical, the Literary or the Scientific course. To secure this end, a thorough mastery of the elementary principles of the *subject* taught, and not a mere knowledge of the text-books required, is most earnestly recommended. Subsequent study can rarely, if ever, atone for deficient preparation.

GOVERNMENT AND INSTRUCTION.

The students of the Preparatory School are under the same general management as the College classes. With a few exceptions, the same general rules are applicable to both, and the students of this School receive instruction from teachers employed especially for this purpose, and also from professors and instructors of the College.

CONDITIONS OF ADMISSION.

Applicants for admission must be at least thirteen years old, and should submit to the President, from their last teacher, satisfactory testimonials of good moral character.

Examinations for admission will be held on Third, Fourth, and Fifth-days, the 13th, 14th, and 15th of Ninth month, 1881. Candidates must present themselves at three o'clock P. M. on Third-day, the 13th of Ninth month. To secure places, applications for admission for the next scholastic year should be made, as early as possible, by letter to the President.

Candidates for admission to Class C will be examined as follows:

In Elements of English Grammar, embracing a knowledge of the Parts of Speech and their uses; Reading and Spelling; Geography of the United States; Arithmetic, through Decimal Fractions.

Candidates for the advanced classes of the Preparatory School will be further examined in the studies of the classes below that which they propose to enter.

EXPENSES, ETC.

For expenses, payments, etc., see under General Information, on page 29.

The charges in the Preparatory School are the same as in the College, with the following exceptions:

In Class C the charge is $300 a year.

The 1st payment is . . .	$200 00
" 2d "	100 00

For Day Scholars the charge is $150.00 a year.

COURSES OF STUDY.

CLASS C.

	No. of Ex. per Week.
Arithmetic.—Brooks's Normal Written and Brooks's Normal Mental Arithmetic, through Interest	4
Geography.—Guyot's Grammar School Geography; Map Drawing	3
Grammar.—Swinton's Language Lessons	3
History.—Ridpath's History of the United States	2
Reading and Speaking.—Phonetic Spelling; Enunciation of Words; Monroe's Fifth Reader; Declamations	3
Spelling.—Selected Words and Dictations	2
Composition	1
Writing	2
Free-Hand Drawing	2

Elective Studies.

Latin.—Harkness's Introductory Latin Book	2
French.—Magill and Paulin's First Lessons in French	2

CLASSICAL COURSE.

CLASS B.

	No. of Ex. per week.
Latin.—Harkness's Grammar and Reader; Cæsar begun	4
French.—Magill and Paulin's First Lessons in French; Magill's Introductory French Reader	3
Mathematics.—Milne's Practical Arithmetic; Brooks's Algebra, through Division	3
Geography.—Warren's Physical Geography	2
History.—Anderson's History of England	3
Reading and Speaking.—Phonetic Spelling; Enunciation of Words; Hillard's Fifth Reader; Declamation	2
Spelling.—Selected Words and Dictations	1
Composition	1
Writing	2
Free-Hand Drawing	2

CLASS A.

Latin.—Harkness's Grammar; Harkness's Latin Prose Composition, first thirty lessons; Cæsar's Gallic War, continued; Virgil's Æneid begun, ... 4
French.—Magill's French Grammar; Magill's Introductory French Reader 3
Mathematics.—Brooks's Algebra to Quadratic Equations; Davies's Legendre's Geometry, Books I.–III. . . 3
Physics.—Elementary Physics and Chemistry (Lectures) . . 1
Uranography.—(Twice a week first half-year) . . . 1
Physiology.—(Twice a week last half-year) 1
History and Geography.—Smith's History of Greece; Review of the History of the United States and England . . 3
Reading and Speaking.—Hillard's Sixth Reader; Murdock and Russell's Vocal Culture; Declamation . . . 2
Spelling.—General Exercises; Dictations 1
Composition 1
Writing 2
Free-Hand Drawing 2

SCIENTIFIC COURSE.

CLASS B.

No. of Ex. per week.

Mathematics.—Milne's Practical Arithmetic; Brooks's Algebra, through Division 4
*__English Grammar.__—Brown's English Grammar . . . 4
French.—Magill and Paulin's First Lesson in French; Magill's Introductory French Reader 3
Geography.—Warren's Physical Geography 2
History.—Anderson's History of England . . . 3
Reading and Speaking.—Phonetic Spelling; Enunciation of Words; Hillard's Fifth Reader; Declamations . . 2
Spelling.—Selected Words and Dictations . . . 2
Composition 1
Writing 2
Free-Hand Drawing 2

* Latin may be substituted for English Grammar in this course, at the request of parents or guardians.

CLASS A.

Mathematics.—Brooks's Algebra to Quadratic Equations; Davies's Legendre's Geometry, Books I.–IV. . . . 4

Physics.—Elementary Physics and Chemistry (Lectures) . 1

***English Grammar.**—Analysis and Parsing, Merchant of Venice 4

French.—Magill's French Grammar; Magill's Introductory French Reader 3

Uranography.—(Twice a week first half-year) . . 1

Physiology.—(Twice a week last half-year) 1

History and Geography.—Smith's History of Greece; Review of the History of the United States and England . . 3

Reading and Speaking.—Hillard's Sixth Reader; Murdock and Russell's Vocal Culture; Declamations . . . 2

Spelling.—General Exercises; Dictations 2

Composition 1

Writing 2

Free-Hand Drawing 2

*Latin may be substituted for English Grammar in this course, at the request of parents or guardians.

List of Students in Preparatory School.

CLASS A.

CLASSICAL SECTION.

Albertson, P. Ella	Jericho, L. I.
Atkinson, Mary M.	New Hope, Pa.
Baker, Minnie F.	Easton, N. Y.
Betts, Mina W., (Irr.)	Wilmington, Del.
Churchman, Philip Q.	Wilmington, Del.
Courtright, Wm. B.	Philadelphia, Pa.
Davis, Clara C.	Upper Darby, Pa.
Davis, Richard H.	Philadelphia, Pa.
Elkins, Wm. L.	Philadelphia, Pa.
Gaston, Carrie R.	Honey Brook, Pa.
Hallowell, J. Mott	West Medford, Mass.
Harbaugh, Annie	Sewickley, Pa.
Hite, Marcus C.	Hites, Pa.
Hopper, Raymond G.	Newark, N. J.
Negendank, Egmont T.	Wilmington, Del.
Scull, Wm. C.	Camden, N. J.
Simmons, Bessie E.	Woodbury, N. J.
Smith, Wm. H.	Canandaigua, N. Y.
Stover, Hugh C.	Erwinna, Pa.
Sutton, Wm. J.	Mt. Kisco, N. Y.
Trimble, Josephine H.	Goshenville, Pa.
Turlay, Esther M.	Hudson, N. Y.
Vernon, Maris H.	Mt. Cuba, Del.
Wethered, Mollie, (Irr.)	San Francisco, Cal.
Woodward, Archie B.	Philadelphia, Pa.

SCIENTIFIC SECTION.

Allen, William	Germantown, Pa.
Bones, Ward H.	New York City, N. Y.
Burton, Ida C.	Tullytown, Pa.
Carter, Robert D.	Elkton, Md.
Clarenbach, Sophia, (Irr.)	Philadelphia, Pa.
Dewey, Wm. H.	New York City, N. Y.
Dixon, Mary G.	Easton, Md.
Forsyth, J. Earl	Pemberton, N. J.
Gaston, John A.	Honey Brook, Pa.
Gregg, Ellis	Unionville, Pa.
Griest, Esther H.	Flora Dale, Pa.
Guthrie, Edward N.	Titusville, Pa.
Guthrie, Lizzie A.	Titusville, Pa.
Hearn, Hiram	Erie, Pa.
Henderson, James H.	Philadelphia, Pa.
Hoopes, Anna W.	Newcastle, Del.
Hoopes, Mary C.	Newcastle, Del.
Jennings, Harry J.	Tidioute, Pa.
Keese, Edmund W.	New York City, N. Y.
Lukens, A. Sidney P.	Neshaminy, Pa.
Marshall, Charles	Milwaukee, Wis.
Mather, Eleanor	Pittville, Pa.
McKnight, Eleanor	Reading, Pa.
Mencke, Wm. F.	Philadelphia, Pa.
Moore, Edgar L.	Philadelphia, Pa.
Moore, George H.	Sandy Spring, Md.
Parsons, Edward B., (Irr.)	Fallsington, Pa.
Richardson, Anna B.	Wilmington, Del.
Riggs, Grant S.	Wilmington, Del.
Rosenthal, Wm. J.	Philadelphia, Pa.
Rulon, Walter C., (Irr.)	Haddonfield, N. J.
Schooley, John C.	Hunting Hill, Md.
Shoemaker, Lizzie L.	Jenkintown, Pa.
Smedley, Edgar M.	Media, Pa.
Smedley, Samuel	Media, Pa.
Spackman, Thomas C.	Honey Brook, Pa.
Speakman, Lucy M.	Wallace, Pa.
Thornton, Samuel	Byberry, Pa.
Underhill, Benj. M.	Orange, N. J.

Vernon, Elizabeth M.	Mt. Cuba, Del.
Whitson, Thomas	Flushing, L. I.
Young, Irving W.	White Plains, N. Y.

CLASS B.

CLASSICAL SECTION.

Bartram, Hannah M.	Newtown Square, Pa.
Beyea, Edwin M.	Dunmore, Pa.
Brewster, Rachel W.	Rahway, N. J.
Chandler, Frazer P.	Philadelphia, Pa.
Clothier, Elizabeth J.	Philadelphia, Pa.
Clothier, Mary J.	Philadelphia, Pa.
Cocks, Elizabeth H.	Westbury, L. I.
Haines, Emma R.	Rio Grande, N. J.
Hopper, Stanley	Newark, N. J.
Levis, Sarah L.	Upper Darby, Pa.
Lucas, Cornelia.	Philadelphia, Pa.
Sharpless, Marian	Lima, Pa.
Simmons, Marian	Woodbury, N. J.
Simon, David E.	Philadelphia, Pa.
Smedley, Elizabeth	Media, Pa.
Taylor, Howard G.	Byberry, Pa.
Tilton, Josephine H.	New York City, N. Y.
Wethered, Woodworth	San Francisco, Cal.

SCIENTIFIC SECTION.

Baker, John C. W.	Jenkintown, Pa.
Bones, Emma	New York City, N. Y.
Brognard, Mary C.	Morton, Pa.
Brown, Florence M.	Philadelphia, Pa.
Dingee, Charles	Newportville, Pa.
Gaskill, Helen L.	Birmingham, N. J.
Haldeman, Sarah G.	Philadelphia, Pa.
Haley, John J.	Oakdale, Pa.
Hires, Lucius E.	Salem, N. J.

Hoopes, Elizabeth B.	Wilmington, Del.
Jackson, H. Louis	Fort Sully, Dakota.
Jones, David T.	Philadelphia, Pa.
Ketcham, Henry A.	Toledo, Ohio.
Lawton, John F.	Toledo, Ohio.
Matlack, J. Walter	Bryn Mawr, Pa.
Miller, Charles C.	Philadelphia, Pa.
Miller, Robert G.	Mannington, N. J.
Newbold, Ella	Philadelphia, Pa.
Pusey, Lillie J.	Wilmington, Del.
Richardson, Martha	Wilmington, Del.
Stover, Carrie C.	Erwinna, Pa.
Sumner, Edward W.	Brooklyn, L. I.
Sumner, Helen K.	Brooklyn, L. I.
Thomas, Mary L.	Perth Amboy, N. J.
Thompson, Justice M.	Philadelphia, Pa.

CLASS C.

Allen, Theodore R.	Woodstown, N. J.
Baker, Frederick R.	Philadelphia, Pa.
Bennett, Alice H.	Philadelphia, Pa.
Cabada, Emilio F.	Philadelphia, Pa.
Clarendon, Thomas	New York City, N. Y.
Eves, Amelia	Swarthmore, Pa.
Eves, Loretta	Swarthmore, Pa.
Hagerty, Summerfield	Baltimore, Md.
Hite, Lizzie J.	Hites, Pa.
Jones, Ella	Philadelphia, Pa.
Lafferty, Minna P.	Camden, N. J.
Latty, Edwin A.	Defiance, Ohio.
Lawrence, Reginald A.	Brooklyn, N. Y.
Marshall, Wm. J.	Milwaukee, Wis.
Merrill, Frank S.	New York City, N. Y.
Mickley, Edgar	Philadelphia, Pa.
Middleton, Edwin	Philadelphia, Pa.
Morrison, Clarence	Camden, N. J.
Naylor, Morris	Philadelphia, Pa.
Needles, Arthur C.	Baltimore, Md.

Neucheler, Irving	New York City, N. Y.
Ogle, Charles W.	Philadelphia, Pa.
Parrish, Adelaide J.	New Egypt, N. J.
Spooner, David C.	Philadelphia, Pa.
Thomas, Mandeville	Perth Amboy, N. J.
Van Zandt, Sarah	Philadelphia, Pa.

SUMMARY.

Class A.	67
Class B.	43
Class C.	26
Total in Preparatory School	136

GENERAL SUMMARY

OF THE

COLLEGE AND PREPARATORY SCHOOL.

Resident Graduates	2
Senior Class	14
Junior Class	25
Sophomore Class	38
Freshman Class	51
Preparatory School	136
Total	266

SUMMARY BY STATES.

Pennsylvania	154
New York	33
New Jersey,	28
Delaware	16
Maryland	15
Ohio	3
Virginia	3
District of Columbia	2
Wisconsin	2
California	2
Massachusetts	2
Canada	2
Nebraska	1
New Hampshire	1
Indiana	1
Dakota	1
Total	266

Officers of the Alumni Association.

1880-81.

PRESIDENT.

ARTHUR W. BRADLEY,	*Germantown, Pa.*

VICE PRESIDENTS.

ELIZABETH C. MILLER,	*Swarthmore, Pa.*
EUDORA MAGILL,	*Swarthmore, Pa.*
JOSEPH FITCH,	*237 Broadway, New York, N. Y.*

SECRETARY.

ABBY M. WOODNUTT,	*1528 Arch St., Philadelphia, Pa.*

TREASURER.

WILLIAM J. HALL,	*West Chester, Pa.*

EXECUTIVE COMMITTEE.

HELEN T. COMLY,	*110 N. 15th St., Philadelphia, Pa.*
WILLIAM P. HOLCOMB,	*Swarthmore, Pa.*
CHARLES R. MILLER,	*709 Walnut St., Philadelphia, Pa.*

-114186-

MINUTES

OF THE

SEVENTEENTH ANNUAL MEETING

OF THE

STOCKHOLDERS

OF

SWARTHMORE COLLEGE,

HELD

TWELFTH MONTH SEVENTH,

1880.

MINUTES.

At the Seventeenth Annual Meeting of the Stockholders of Swarthmore College, held at Race Street Meeting-House, Philadelphia, 12th month 7th, 1880, due public notice having been given, in accordance with the provisions of the Charter:—

The Minutes of the last Annual Meeting were read and approved.

The Treasurer submitted the following Report, which was read, approved, and referred to the incoming Board for publication:

TREASURER'S REPORT.

ROBERT BIDDLE, *Treasurer, in Account with* SWARTHMORE COLLEGE.

1879.		*DR.*	
9th mo. 9th.	To Balance on hand,		$1,026 94
	" Capital stock, $1,025 New York, $100 Philadelphia,		1,125 00
	Donation, Sarah H. Baker,		20 00
	Amount received for Tuition acc't,		82,180 64
	" " " Board,		5,682 17
	" " " Stationery,		517 31
	" " " Farm Products,		2,395 58
	" " Petty Cash,		580 58
	" " " Rents,		260 00
	" " " Gas,		40 00
	" " " Interest,		873 27

	CR.	
By Salaries,		$26,718 64
" Wages,		6,399 25
" Incidentals,		2,179 28
" Repairs,		12,956 52
" Provisions,		14,082 98
" Fuel,		2,461 52
" Light,		3,213 31
" Farm,		2,089 00
" Furniture, Stationery, &c.,		1,841 38
" Books,		1,650 43
" Butter,		2,864 87
" Meat,		7,126 67
" Insurance,		450 00
" Interest on Endowment,		1,750 00
" S. Willets' Fund (balance),		2,539 87
" Educational Endowment Fund,		5,500 00
" Returned Tuition,		754 69
" Balance in hands of Treasurer,		123 08
	$94,701 49	$94,701 49

We have examined the above account of Robert Biddle, Treasurer, compared the vouchers for payments, and found the same correct.

M. FISHER LONGSTRETH,
EDWARD H. OGDEN, } Auditors.

9th mo., 14th, 1880.

Report of the Treasurer of the Committee on Trusts, Endowments and Scholarships.

CLEMENT M. BIDDLE, *Treasurer, in account with* COMMITTEE ON TRUSTS, ENDOWMENTS AND SCHOLARSHIPS OF SWARTHMORE COLLEGE.

INVESTMENT ACCOUNT.

DR.

General Endowment Fund.		
Samuel J. Underhill,	$5,000 00	
Isaiah V. Williamson,	10,000 00	
Anson Lapham,	5,000 00	
		$20,000 00
Educational Endowment Fund.		
Thomas H. Speakman,	$100 00	
Deborah F. Wharton,	5,000 00	
Isaiah V. Williamson,	25,000 00	
		$30,100 00
Special Scholarship Fund.		
Westbury Quarterly Meeting,		$5,000 00
Perpetual Scholarship Fund.		
Anson Lapham,		10,000 00
Special Endowment Eund,		10,000 00
		$75,100 00

CR.

Ground Rents, I. V. W., Philadelphia,	10,000 00
Swarthmore College,	25,100 00
Schuylkill Navigation Company Bonds,	5,000 00
Property 727 Chestnut Street, ⅓ Interest,	25,000 00
Mortgage Account,	10,000 00
	$75,100 00

Twelfth mo. 7th, 1880.

The terms of office of the following Managers expired at this time:

Clement M. Biddle,	Rachel T. Jackson,
B. Rush Roberts,	Anna M. Hunt,
Joseph Willets,	Caroline Underhill,
Eli M. Lamb,	Susan W. Lippincott.

To nominate the officers of the Corporation required by the Charter, viz.: two Clerks and a Treasurer, to serve for the ensuing year, and eight Friends, who are Stockholders, to fill the vacancies in the Board of Managers: the following were appointed:

Anna M. Ferris, Jane P. Downing, Job H. Jackson, Mary C. Blackburn, Robert Willets, Mary W. Cocks, Daniel Underhill, Jane D. Sat-

terthwaite, Isaac Eyre, Isaac H. Cocks, Edward Hoopes, J. Emlen Sharpless, Joseph Matthews, Annie Cooper, Eliza H. Bell, and Isaac H. Clothier.

The following Report of the Board of Managers was read, approved, and referred to the incoming Board, with authority to print and distribute five thousand copies:—

MANAGERS' REPORT.

Another successful year has been added to the history of Swarthmore College. During the past and the present year, the number of students has reached and maintained a higher point than at any previous period, and the standard of admission to the various classes has been steadily advanced.

The organization of the College continues the same as last year, with the exception of the omission of the lowest class (D) in the Preparatory School. The whole number of students entered to date, for the present year, is 264, of whom 147 are boys, and 117 girls; the relative number of girls during the past and present years being a considerable increase upon those of previous years. They are classified as follows:—

Seniors—Classical Dep't,	4;	Scientific Dep't, 4;	Literary Dep't, 6
Juniors " "	15;	" " 4;	" " 6
Sophomores " "	13;	" " 13;	" " 7
Freshmen " "	16;	" " 12;	" " 15
Not classified, ...			15
Total in the College, ...			130
Class A—Classical Department,	22;	Scientific Department, .	40
" B " "	14;	" " .	28
" C	26		
Not classified, ...			4
Total in the Preparatory School, ...			134

The various departments of the Institution continue in a satisfactory condition, and are under the same general management as last year, except that the chair of Elocution was vacated by the resignation of M. Marie Underwood, after three years of most valuable service. Her place has been filled by the appointment of J. E. Weld, of New York.

The Department of Natural History has received important accessions during the year, in valuable additions to our Cabinet from interested friends, and by purchase. To receive the specimens of rocks and minerals belonging to the different Geological periods, four new alcoves have been filled with cases. These additional cases relieve the shelves of those previously arranged, and provide ample room for future contributions. The principle of construction of this Cabinet from the beginning, has been to make it practically available as a means of familiar illustration of the lectures upon the different branches of Natural History, and not a mere collection of curiosities. The result is, that it is already a fine working cabinet of great and constant service in teaching this interesting and important Department. The lectures upon Natural History continue to be delivered by Dr. Joseph Leidy, and attendance upon them is required of all students who pass through a regular college course, in any of the Departments. The entire course consists of eighty lectures on Zoology and Comparative Anatomy, and fifteen each upon Geology, Mineralogy and Botany. Courses of lessons, in classes, upon the three last named subjects are also now established, continuing through several months of each year, to which the fifteen lectures are supplementary.

The attention of the Stockholders is again called to the pressing need of better accommodations for the Scientific departments of the College, and to the statement on this subject in the last annual report. They have entirely outgrown the space allotted them in the main building, and steps should be taken at once to provide for them elsewhere. No one can question the value and importance of the instruction which these departments offer, and the Managers hope that means may be furnished them with which to provide a suitable building for the class rooms and lecture rooms, laboratories and work shops required. Few even of those who visit the College are aware of the character and amount of work which is done in these scientific departments, hidden away as it is in back buildings and out-of-the-way places, with much of the apparatus stored in rooms distant from where it is used. Suitable rooms also while actually needed for the department of study, will do very much towards correctly exhibiting the work of the College, and towards attracting those who desire this kind of instruction.

On account of the fumes from the Laboratories and the noise of the machinery, this work should be carried on away from the main building, and in one especially adapted for it and devoted to it; and because of the character of the work, the interior of this building should be finished in the simplest and plainest manner. It is believed therefore that a building whose exterior shall be in keeping with the other structures already on the grounds, and which will give ample accommodations for all the Laboratories and Work Shops and Recitation, Lecture and Draughting Rooms needed, can be erected, at the present prices of material and labor, for a sum not exceeding $25,000.

The Library is slowly increasing chiefly by the addition of bound periodicals from the reading-room, by gifts of books, and a few purchases from year to year. This method of increasing the Library is very unsatisfactory, for it does not give us the best and latest books relating to the subjects of instruction or connected with them. A good library, well managed, is of great value to the College. It is in fact an assistant-instructor in all departments of study, and as such should be kept alive and up to the times, and liberally maintained. There is greatly needed a fund, the income of which shall be devoted to the maintenance and increase of the Library. The students' libraries number several hundred volumes, and are subject to the frequent examination of a committee of the Faculty, to whom also new books proposed to be purchased must be submitted for approval. The general library has been rearranged on the Dewey system, by which all books relating to the same subject will be grouped together on the shelves, with those on kindred subjects adjoining them, while the numbers which indicate a book's place on the shelves also indicate the subject-matter of the book. This system also enables the librarian to keep a complete record of the character of the reading of each student, and of the use made of each book. A catalogue of subjects treated of is in preparation. To the "Friends' Historical Library," founded by Anson Lapham, no important additions have been made during the year. Opportunities often occur to the librarian of purchasing at low rates, desirable works of early Friends which are not in the library, and the addition of which would greatly assist in completing the collection. A small fund at his disposal to be expended for this purpose as occasions offer, subject to the approval of the committee having this library in charge, would enable him to secure books which are growing more and more scarce. The sum of one hundred dollars has recently been contributed for this purpose by two of the friends of the College.

One distinguishing characteristic of Swarthmore, as compared with most of the Colleges of this country, is the combination of college and home life; being a well conducted home for its students, as well as an Institution of learning. To secure more perfectly this very desirable end, it is deemed essential that those employed in giving instruction should be thoroughly imbued with the spirit of the place, and in sympathy with this peculiar feature of the College; and that their labors in the class room, important as these must ever be, should be considered by them as not more important than the indirect daily influence which they exert in mingling with the students at other times. The problem of joint education can never be thoroughly and satisfactorily tried in an institution which does not combine home and college life. After a thorough test of more than eleven years under these most favorable circumstances at Swarthmore we are increasingly satisfied with the excellent results produced upon the health, the character, the scholarship, and the general culture of young men and young women alike.

The social interests of the students are under the immediate oversight of the Matron, who has charge of the girls during the periods not occupied by their studies or recitations, and the care and discipline constantly exercised by her is an important element in the successful government of the College.

More marked changes and improvements have been made upon the grounds since the last report than during any previous year. The old road, spoken of as vacated last year, has now been filled up and graded, which with other improvements makes them far more attractive to the eye. A new asphaltum walk, 18 feet broad has been built from the College to the station, with two flights of granite steps on the steepest part of the slope, making a commanding approach to the buildings. This walk has been bordered by a row of young oaks upon each side throughout its whole extent, which will form a very fine avenue in the course of time. A new entrance to the grounds has been laid out, leading past the West mansion, and a double row of trees planted on each side of it. More than two hundred trees have been planted upon the grounds during the year, including two rows along the public highway throughout the extent of the College property. A new approach to the College on the North has also been made, connecting directly with the new road to the East opened last year. Much expense has necessarily attended these improvements, part of which was met by the current receipts of the College, but the necessary funds have been chiefly furnished by one to whom the College is already very largely indebted for his generous aid and assistance in the past. Considerable expense has been incurred upon the building itself, it having been almost entirely newly roofed, and all the rooms in the East end were thoroughly painted during the summer vacation.

The Managers desire to express to the Stockholders their great satisfaction with the present condition and future prospects of the College. As it becomes more widely known, the advantages which it offers are more and more sought both by those within and without our Religious Society. By sending out teachers from our graduating or upper classes properly prepared to take charge of Friends Schools in our various neighborhoods, students will be enabled to enter the College proper or the higher classes of the Preparatory School, and thus, both directly and indirectly, the progress of education among Friends will be greatly promoted. The true interests of Swarthmore are not at variance with the establishment of home-schools in as many neighborhoods as possible, throughout the limits of our Society, and if these schools are properly conducted, by conscientious, able and well trained teachers, there, within reach of the daily home influence, the best foundations will surely be laid for that education to be completed at a later period at the College. This is the true ideal which intelligent Friends, who have at heart the best interests of education throughout our Religious Society, must ever bear in mind. Its early attainment, hoped for from the establishment of the College, becomes

more and more certain as the years go by. It is believed that those immediately entrusted with the management of the school and College feel that, while it is a work of intellectual training in which they are primarily engaged, it must at the same time be pursued under a truly religious concern, if the Institution is to answer the full end designed by its wise and beneficent founders. While a knowledge of Science, Mathematics, the Languages, and other parts of its varied and extensive curriculum is essential, the chief end must never be lost sight of:—the proper preparation—by mental, physical, moral, and religious training combined, of our young men and young women for the responsible positions which they are to occupy in life. As heretofore, about one half of the students are members of our Religious Society, or directly descended from Friends' families. A much larger proportion are more or less remotely descended from Friends. It is to be hoped that the time is not far distant when, by large accessions to the Endowment Fund, we may be enabled so to reduce the price of tuition as to place the advantages of Swarthmore within the reach of all of our members. It is believed that as the Institution is now managed, equal advantages can be obtained nowhere else at rates so reasonable. The extensive appliances at our command for imparting instruction in the various departments, have been collected at great expense, and such instruction as is given at Swarthmore requires a large outlay for salaries. Nor are these advantages confined to the students of the higher classes, but all, even the youngest, are, to a greater or less extent, partakers of the advantages of apparatus, lectures, and experienced instruction, which must be provided for the more advanced classes in the College. It will thus be seen that in no way can Friends obtain these advantages at so cheap a rate, as by adding to the Endowment funds of Swarthmore, thus increasing the already large facilities there offered, and making them accessible to all. That Swarthmore has a long and successful future before it, and that it is yet destined to become one of the great instruments for good in an educational point of view, is not only our earnest hope, but our confident belief. That it may never fail to fulfil the highest hopes and expectations of its founders and its friends, we bespeak from the stockholders a continuance of that active interest in the practical working of the Institution which many of them have felt from the beginning, and aided by their suggestions and strengthened and encouraged by their sympathy and co-operation, those having it immediately in charge will surely endeavor to make it more and more nearly reach the highest ideal, as the representative educational institution of the Society of Friends.

Since closing our report, we have received the intelligence of the death of B. Rush Roberts, another valued friend, whose loss must be included in our record of the past year. He early released himself from the restraints of an active business life, and had leisure as well as inclination to give to the higher interests and duties that claimed

his attention, and was one of those who saw and felt the advantages which Swarthmore offered for a more enlarged education within the limits of our Society.

He was appointed a member of the first Board of Managers, and continued in active service to the close of his life, with unabated interest in the welfare and success of the institution.

It seems fitting, on this occasion, to refer to the loss which we have lately sustained in the death of our friend LUCRETIA MOTT, whose voice was ever heard in our annual meetings, cheering us with words of counsel and encouragement.

She believed that the right cultivation and training of the intellectual faculties enlightened and enlarged the mind so as to make it a more fitting receptacle for Divine light and truth; and as she was one of the earliest and ablest advocates in our Society for a higher standard of education, her sympathies and interests were enlisted in the first efforts to provide for the need she had long felt. The system of joint education also received her cordial approval, and although never one of the Managers of Swarthmore, she manifested a warm and living interest in the work from the beginning. A few months before the College opened, her husband remarked that, if they were younger, it would be a satisfaction to himself and Lucretia to offer their services gratuitously for the benefit of the institution, and added that they felt that they could devote their lives to no nobler or more useful work.

The memorial trees which they planted still flourish on our grounds, and we can only trust that the interests and hopes that were planted with them may also flourish and bear fruit in the future.

M. FISHER LONGSTRETH,

SECRETARY.

PHILADELPHIA, 12th mo. 6th, 1880.

A proposition was received from the Board of Managers to make the following change in the By-Laws:—

Insert in By-Law I, "Third and Ninth Months, instead of "Second and Ninth Months."

The proposition was approved, and the By-Law as changed was adopted.

Notice was given that authority would be asked, after the expiration of three months, to purchase a lot of fourteen and a half acres of land, known as the Harper Lot, and adjoining the grounds of Swarthmore College.

The Nominating Committee, having withdrawn for a time, submitted the following nominations:—

CLERKS FOR ONE YEAR.

George W. Hancock, Matilda Garrigues.

MANAGERS FOR FOUR YEARS.

Clement M. Biddle,	Rachel T. Jackson,
Joseph Willets,	Anna M. Hunt,
Eli M. Lamb,	Caroline Underhill,
Benjamin Hallowell, Jr.,	Susan W. Lippincott.

TREASURER FOR ONE YEAR.

Robert Biddle.

To serve as Tellers, Isaac H. Clothier, Isaac H. Cocks, and Joseph Matthews were appointed.

An election by ballot was held, and the Tellers reported the above officers unanimously elected.

The changes in the Constitution proposed at the last Annual Meeting were read. By the unanimous consent of the meeting the propositions were withdrawn.

The following change in the Constitution was proposed for consideration next year, and the Clerks were directed to give the required notice to the Stockholders.

In Article II, for "The Annual Meeting of the Stockholders shall be held on the first Third day in the Twelfth month, at three o'clock P. M.," read "The Annual Meeting of the Stockholders shall be held on the first Third day in the Twelfth month, at two o'clock, P. M.;" or, "The Annual Meeting of the Stockholders shall be held on the first Third day in the Twelfth month."

Then adjourned.

GEORGE W. HANCOCK,
MATILDA GARRIGUES, } *Clerks.*

COMMITTEE

ON

Trusts, Endowments and Scholarships.

SAMUEL WILLETS, 303 Pearl Street, New York City, N. Y.

JOSEPH WHARTON, P. O. Box 2786, Philadelphia, Pa.

DANIEL UNDERHILL, Jericho, L. I.

ISAAC H. CLOTHIER, 801 Market Street, Philadelphia, Pa.

CLEMENT M. BIDDLE, Secretary and Treasurer,

506 Commerce Street, Philadelphia, Pa.